



# The Renovator

A Pentagon Renovation Program Newsletter



Volume 5, Number 3

October/November 1998

# MOVE-IN!

There were no fireworks. There was no ceremony; no media coverage, but on Sept. 2, 1998, 41 employees from the Under Secretary of Defense Offices of the Comptroller and the Policy Automation Directorate, quietly became the first personnel to move into renovated space inside the Pentagon.

"It's a significant milestone," said Lee Evey, program manager for the renovation effort. "It took a tremendous amount of sweat and tears to arrive at this point."

In fact, more than four years of "sweat and tears" to be exact. But now, the sounds of driving 1,800 piles to support a new floor slab, back-

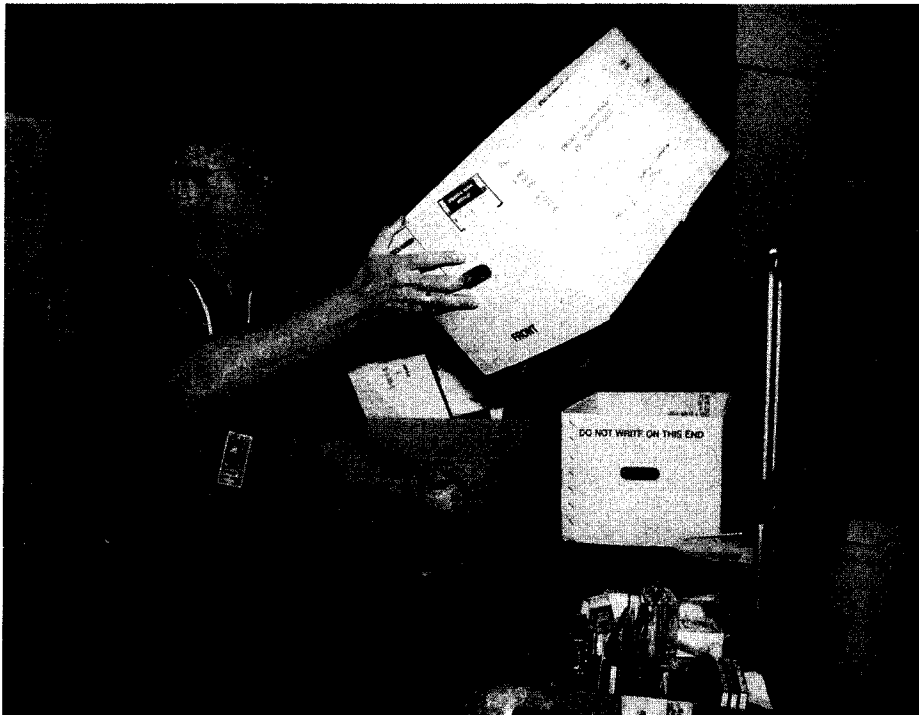
hoes excavating 45,000 cubic yards of dirt and rubble, and the grunts and groans from thousands of hours of manual labor have been replaced by the soft hum of computers, ringing phones and percolating coffee pots.

"In a way it's fitting that this turn-over occurred with little fanfare," said Evey. "We'd like to make the transition from the old to the new as seamless as possible, and our goal has always been to renovate the Pentagon while minimizing disruption to the tenants. So in that sense, the less we're noticed, the better. However, we do want people to know the benefits of what we're trying to accomplish."

That shouldn't be too difficult. Just ask some of the new tenants in the basement about the benefits of the renovation. At first glance, one might think the comments printed here and on the following two pages have come from people who have just moved into the 40<sup>th</sup> floor of a modern high-rise, not the lowest level of a 55-year-old federal building.

"It's like night and day," said Gladys Crews, administrative assistant in OUSD/PAD. "It's just fantastic, and no more ugly green carpet,"

(continued on page 2)



Don Barger, senior hardware technician for the OUSD/Comptroller, Technical Support Center, tosses a box he just emptied of office supplies. Barger was among the first employees to move into newly renovated space in the Pentagon's basement.

## MOVE-IN! *(from front page)*

said Crews, referring to her old quarters. "This office is more professional, more spacious. We have new furniture and the air quality is just fine. Everyone's morale has been boosted."

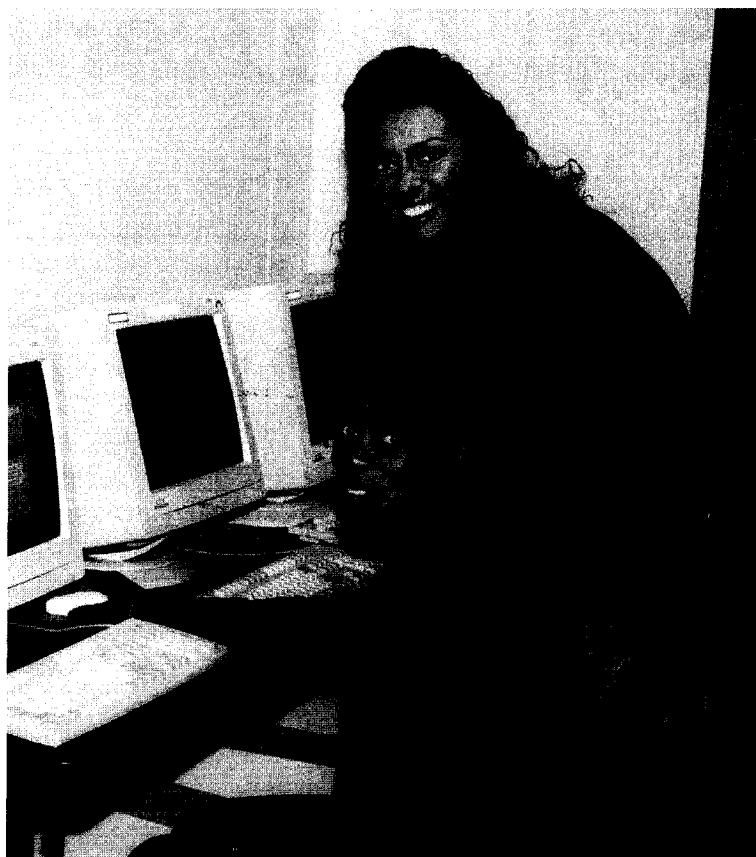
When reminded that she was talking about the Pentagon's basement, Crews just shook her head. "That's not the perception we have. It's brighter and roomier than where we came from. The only way you know you're down in the basement is when you leave the office."

And even that will change once the halls and corridors receive their new finishes over the next few months.

Ronnie Larson, director for OUSD/PAD, said that there is an additional benefit besides the professional environment. "We were able to consolidate three of our offices and that will improve our productivity and efficiency," said Larson.

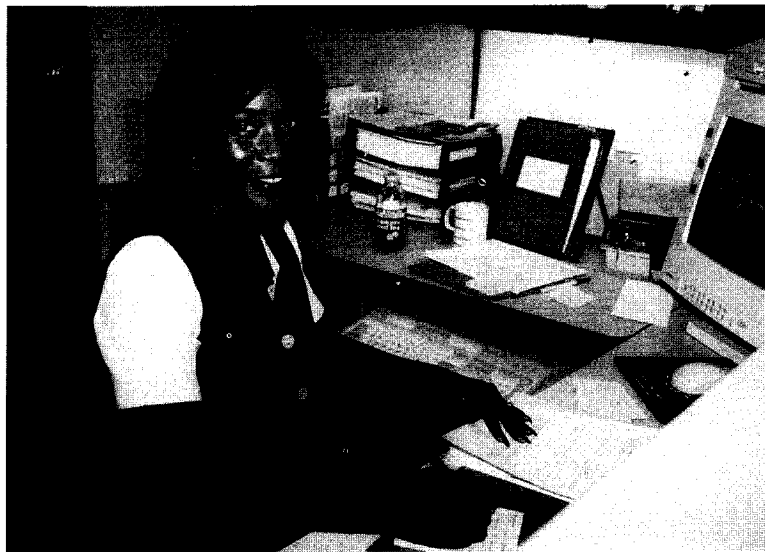
"There's always going to be rough edges with any move," he added. "But there were no show-stoppers. We came down here and everything worked. We had secure communications and there was no interruption of mission."

Perhaps Nancy Pilker, data modeler, PAD, best summed up the change from the old office to the new one. "Space was tighter in our old office and the furniture was mismatched. Everything is well laid out here and brighter. I don't feel like I'm in the basement. In fact, I don't even feel like I'm in the Pentagon."

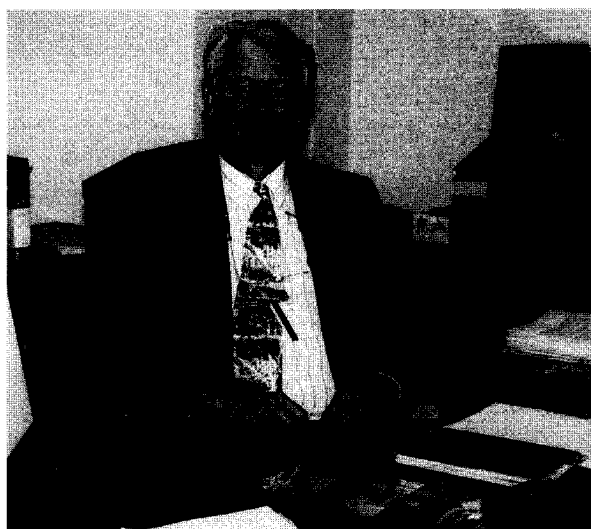


**Dawn Glencer (standing), software training instructor, OUSD/PAD:** "The area is much more aesthetically pleasing and our training center, unlike the old one, is separated from the rest of the office. We aren't distracted anymore by phones ringing and we have more classified machines to teach with."

**Gaybriel Harmon, software training instructor, OUSD/PAD:** "It's simply a more professional environment. We no longer have to compete with office noise and other distractions to do our job."

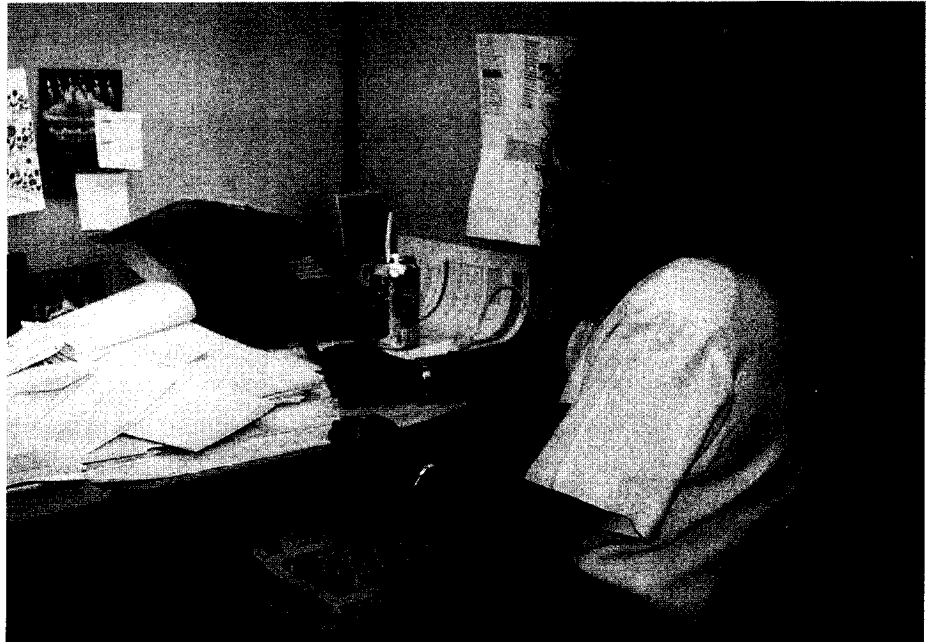


**Gladys Crews, administrative assistant in OUSD/PA:** "The difference has been like night and day... Everyone's morale has been boosted."



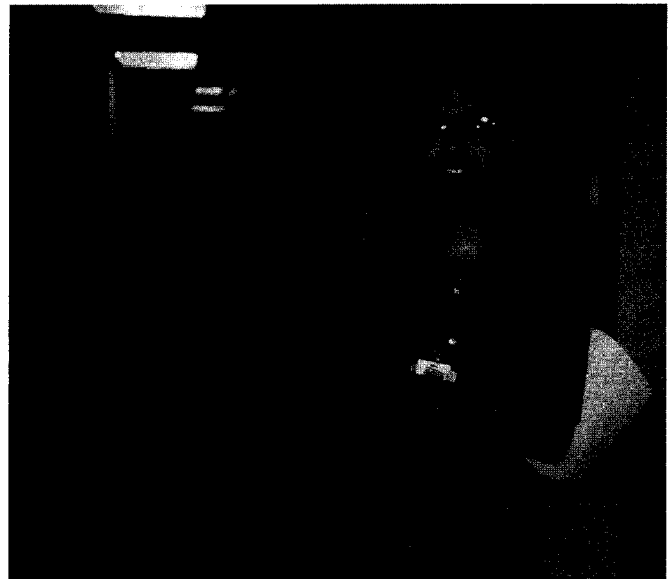
**Mr. Ronnie Larson, director, OUSD/PAD:** "We were able to consolidate three of our offices and that will improve our productivity and efficiency."

Theresa Kowalczyk, a computer specialist and the Help Desk team leader, OUSD/Comptroller, said she had a few reservations about coming to the basement. "I dreaded coming down here at first, because I thought it would be dark and dirty. Instead, I was very surprised at how bright and clean it was. It's a very pleasant work environment."



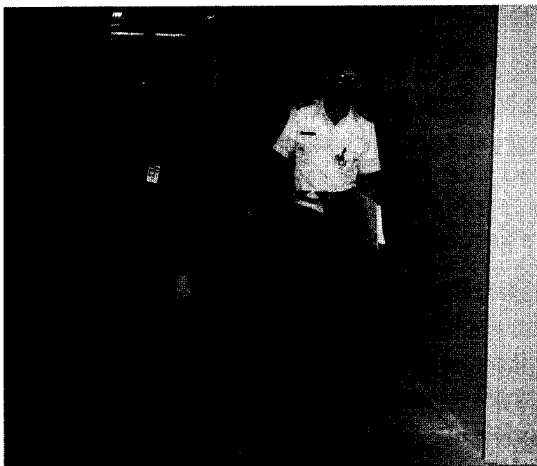
"... I don't feel like I'm in the basement. In fact, I don't even feel like I'm in the Pentagon."

— Nancy Pilker, data modeler, OUSD/PAD (pictured below)



Bryan Coleman, senior systems analyst, OUSD/PAD: "It's awesome. It's a professional working environment and I love the fact that we're in the basement. It's more secure and private. We used to be in a lot of little offices, but now that we're consolidated, it's easier to interface with others."

"When they had to add an analog phone line under my desk, they simply removed the floor tile and ran the new line. The next morning, you couldn't tell that anything had been done. There's definitely more flexibility in the layout here."

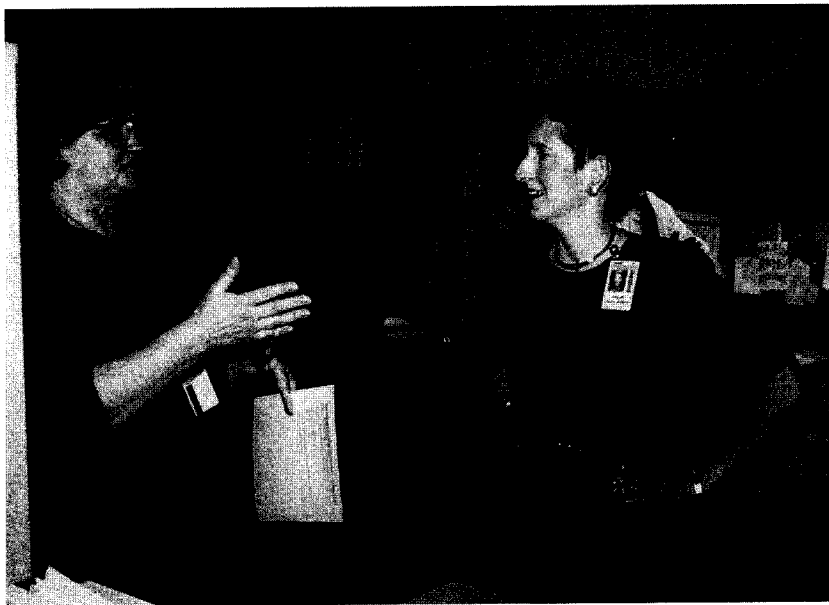


What's missing? For the first time in several years, personnel can walk the halls of the basement without hardhats.

(see MOVE-IN on page 4)

## MOVE-IN!

(continued from previous page)



During a recent tour of renovation activities, Alice Maroni, deputy principal comptroller, OUSD, met some of the employees working at the new Comptroller's Help Desk located in the basement.

"The conversion is absolutely amazing," said Maroni. "You would never imagine that you're in the basement of the Pentagon."

"I'm pleased that our people can now perform their work in a safe, modern and pleasing office environment. It's a big improvement over their old office space."

Alice Maroni (right), principal deputy comptroller, OUSD, speaks with Inta Grins, a computer specialist at the OUSD(C) Help Desk, about her new office in the Pentagon's basement.

## "Teaming" to enhance designs, reduce costs

On most building or renovation projects, design precedes construction.

However, a new initiative at the Pentagon Renovation Program is aimed at bringing the designer and construction contractors around the drawing table before designs are complete.

Toward that end, three construction contractors will be awarded contracts to "team" with the designer during a portion of the design for renovation of Segments 2 and 3 of the Pentagon's basement.

"Simply put, the goal of teaming is to reduce design and construction costs while increasing the quality of



Harriet Ross (center), the Renovation Program's project leader for renovation of Segments 2 and 3 of the Pentagon's basement and mezzanine, describes project site conditions to construction contractors who will potentially "team" with the project designer during a portion of the design phase.

the end product," said Harriet Ross, project leader for Segments 2 and 3. She added that getting input from three construction contractors after they've had time to work with the designer will improve the design.

"The input from construction contractors will help the designer produce a design that represents the best overall value that can be built in the least amount of time and with minimal changes," Ross said.

Tenants and all other key players also will be involved during the process to ensure the best possible design.

"It's all about communication," said Ross. "The teaming

agreement with contractors and the continuous dialogue with the Pentagon community are aimed at resolving issues before construction begins. That saves time and money and ensures a satisfied customer."



Dave Westrick (left), Wedge 1 Team Leader, describes the progress in Wedge 1 to Deputy Secretary of Defense Dr. John Hamre (center) as he toured renovation sites with Pentagon Renovation Program officials. Also pictured from right: Carl Kohlmeyer, program manager for Radian International; Phebe Novakovic, special assistant to the deputy secretary of Defense, and Lee Evey, program manager for the Pentagon Renovation.

## Dep. Secretary of Defense tours renovation sites

In early September, Deputy Secretary of Defense Dr. John Hamre, toured renovation activities with several members of the Pentagon Renovation Program. The tour included Wedge 1, renovated areas in the Basement/Mezzanine, the new Center Courtyard utility distribution tunnel, and the Tri-Care Clinic.

"There has been tremendous progress made thus far," said Hamre as he scanned the vast areas that have been cleared in Wedge 1. "But there are 10 years of work ahead and it will take the cooperation of the entire Pentagon community to ensure this program's success."

Lee Evey, program manager for the Pentagon Renovation, is encouraged by Hamre's strong interest in the program. "It's always a tremendous boost to have support at the highest levels," said Evey. "The deputy secretary of Defense has taken a personal interest in seeing that this program moves forward, even to the point where he's willing to knock on doors."



Renovation team members Mario Lopez (center), director of the tenant activities group, and Stacie Condrell, architectural consultant, briefed Deputy Secretary of Defense Dr. John Hamre (left) on the various furniture options, finishes and color schemes available for the renovated Pentagon.

## South Terrace pedestrian bridge shaping up

### *On schedule for January 1999 completion*

Indiana limestone will soon be en route to the Pentagon's South Terrace as construction of the Corridor 2 pedestrian bridge nears 35 percent completion. The limestone will arrive from the same quarry that provided the Pentagon its skin more than 55 years ago.

"We're returning to the original source so we can match the color of the existing limestone," said Jim Wang, a resident engineer for the Renovation Program.

"We're making good progress with concrete placement and we're on target for elevator installation in November," he said.

According to Dave Westrick, Wedge 1 project manager, comple-

tion of the bridge is critical to Wedge 1 renovation. "We need the bridge open as soon as possible so we can close down the Corridor 3 entrance and begin asbestos abatement and demolition in that area."

Once the Corridor 2 bridge is open, tenants will be able to enter the Pentagon directly from the South Parking Lot, no longer having to cross three lanes of vehicular traffic.

According to John Jester, chief of the Pentagon's Defense Protective Service, the bridges will greatly reduce the safety hazards that exist presently while alleviating some of the burden on his staff to maintain traffic. "It's always safer when you separate vehicles and pedestrians.

Once the bridges are completed, we won't need officers directing traffic," said Jester. "With pedestrians no longer competing with vehicles for access, traffic will flow easier along Rotary Road and around South Parking, especially during the afternoon rush hour when more than 2,000 vehicles and 5,000 personnel depart within a two-hour period."

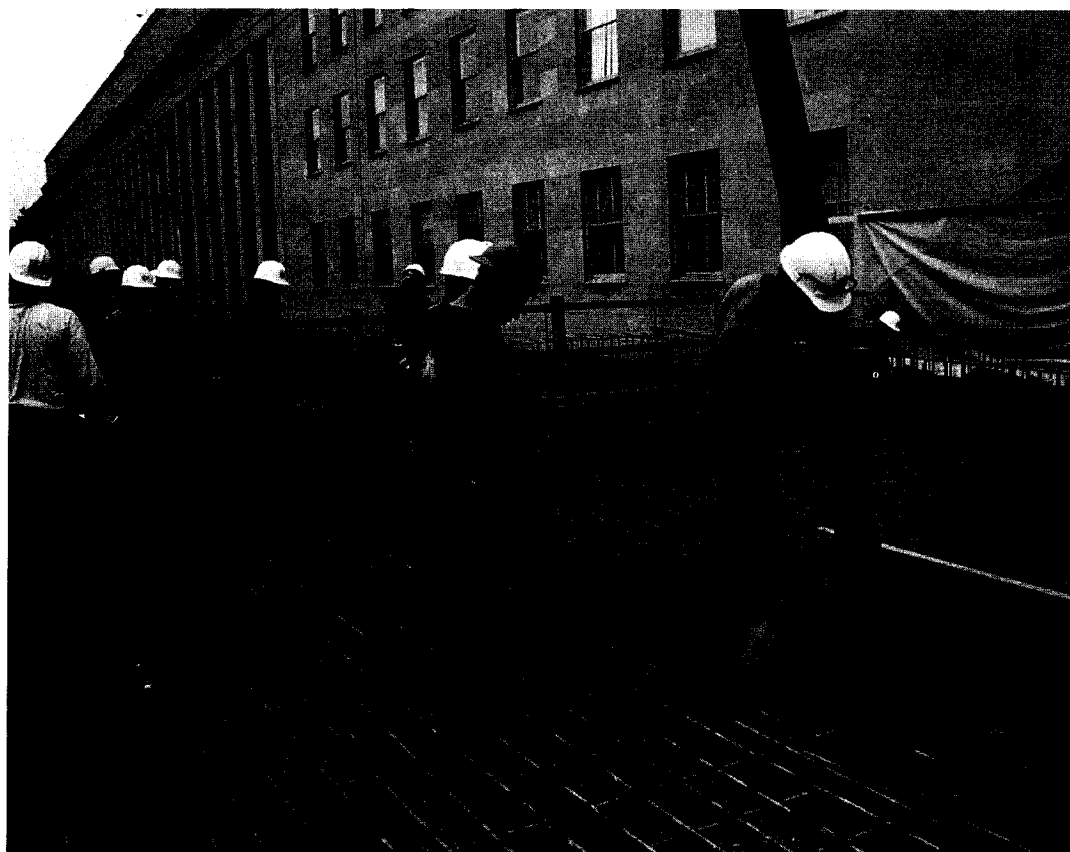
Jester added that the bridges will make it safer for vehicles as well. "Since the bridges will decrease the bumper-to-bumper congestion we see each afternoon, that translates into fewer accidents."

Both the Corridor 2 and 3 bridges will forge new entrances to the Pentagon at the 2<sup>nd</sup> Floor. During the

last few weeks, lead abatement and barrier wall construction began in the interior entrance area at Corridor 2. To ensure safety, tenants are urged to obey all detour signs.

In addition to providing pedestrian access, the Corridor 2 bridge will also house new office space below the pedestrian walkway and adjacent to the Pentagon.

Close to one half of the bridge deck has been completed as well as one of the two concrete walls along the pedestrian walkway. Concrete was also placed for the walls along the stairwell leading to the bus lane. The formwork for the stairs has also been completed.



In September, concrete was placed for the Corridor 2 pedestrian bridge walkway. Construction of the bridge continues on pace for completion by the end of this year. Once the Corridor 2 entrance opens for pedestrian traffic, the Corridor 3 entrance will be closed for Wedge 1 renovation.

## Wedge 1 construction contract awarded

A \$69.5-million construction contract has been awarded to Morse Diesel International, Inc. of Bethesda, Md., to perform the core and shell and tenant fit-out in Wedge 1.

"This is a tremendous moment in the Renovation Program," said Dave Westrick, Wedge 1 project manager. "This contract award was the culmination of an exhaustive team effort. We awarded it as a team and we will construct it as a team," Westrick said.

"Core and shell" refers to building out common elements in the wedge including walls and public corridors and rebuilding the main utility systems. "Fit-out" refers to building out interior office space.

The contract is expected to last 22 months beginning in January 1999. A phased move-in of tenants is expected to begin the summer of 2000.

A comprehensive story on Wedge 1 construction will appear in the next issue of *The Renovator*.

*A computer-generated view of a completed portion of Wedge 1 appears on the next two pages.*



You won't find any tumbleweeds rolling through the corridors of Wedge 1, but a walk through the area quickly gives one the impression of a ghost town. The once bustling area pictured above is home now only to asbestos containment boxes awaiting disposal. As of late Sept. 1998, 75 percent of Wedge 1 has been vacated. Construction crews will populate the wedge in Jan. 1999 with the recent award of a major construction contract.

### Swing Space Update

Another 950 personnel were relocated to swing space in August 1998. The move included 400 Air Force personnel, 250 from OSD, and 300 from the Army National Guard Bureau.

More than 4,000 personnel have been relocated from Wedge 1 with the remainder to be moved by the end of the year.

## Tri-Care Clinic to welcome patients next summer



Work continues below the River Terrace parking area as the construction portion of the new Tri-Care clinic continues on pace for completion early in 1999.

Construction of the Pentagon's new DiLorenzo Tri-Care Health Clinic continues on pace for completion early in 1999.

The Renovation Program's information management and telecommunications team will then move in and install the communications network for the facility. At the same time, the Pentagon medical community will begin installation of the myriad types of medical and dental equipment.

"Before the clinic can welcome its first patient, it must receive all the required accreditations," said Dave Gabel, resident engineer with the Renovation Program. Receiving "accreditations" means that the clinic must meet all the inspection and licensing criteria set by the Joint Commission on Accreditation of Healthcare Organizations. "If all goes well, the new clinic may be able to accept patients as early as next summer," said Gabel.

Most Pentagon personnel will access the clinic from the Corridor 8 entrance area, which is now nearing completion. The Tri-Care Clinic will consolidate the three separate clinics now operating in the Pentagon.

## ***Wedge 1 designs bring the past into the future***

It is often said that we should learn from the past lest we repeat it. But repeating the past, to some degree, is exactly what Wedge 1 designers are doing.

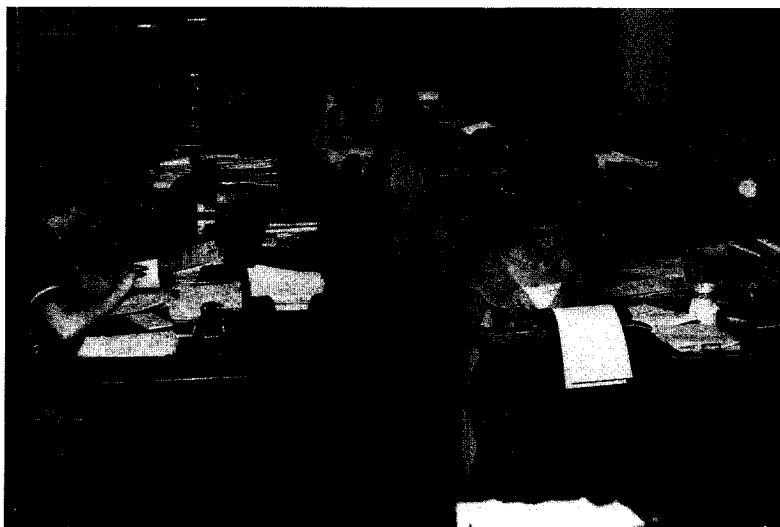
"We're returning to an office environment that is more open," said Mario Lopez, tenant activities group leader for the Renovation Program. "Lower partitions between desks will maximize the use of natural light and allow for a freer flow of air throughout the building."

An open bay office environment (inset) was typical of most of the occupied space in the Pentagon when tenants moved in more than 55 years ago. However, over the years, interior spaces became fragmented with ceiling to floor partitions as office configurations changed along with mission requirements.

"Modern systems furniture provides enormous flexibility," said Stacie Condrell, an architectural consultant for the Renovation Program. "Just as important, it can accommodate current telecommunication systems, including fiber optics, while providing enough flexibility for future technological advances," she added.

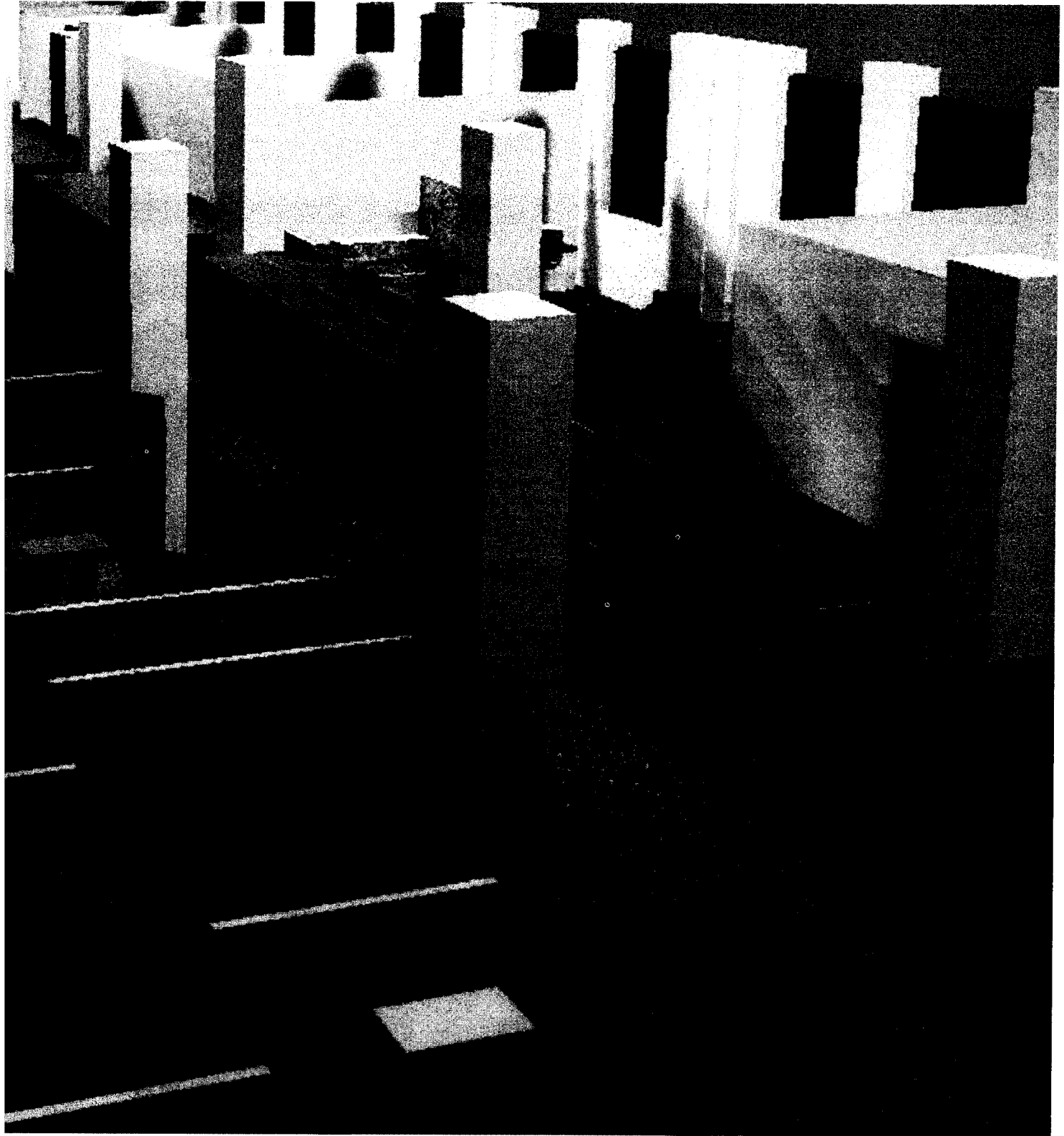
To complete final designs for interior spaces, the renovation team will continue to work closely with tenants to ensure requirements are met.

"The tenants have been, and will continue to be, intimately involved in the design process," said Lopez. "This will keep us from having to make changes after space is turned over. Minimizing changes saves us time and money."



Open bay office space was once typical of most areas in the Pentagon.





**This computer-generated rendering of a proposed Wedge 1 design features a return to the “open bay” office environment.**

## Concourse becomes home to temporary offices

A 3,200-square-foot temporary health facility is being constructed in the Pentagon's Concourse near the Anthony DiLorenzo Army Health Clinic. The space will accommodate approximately 20 offices and exam rooms necessary to give health clinic support to the Pentagon civilian workforce.

The clinic will operate in this location for approximately 12 months while the new DiLorenzo Tri-Care Health Clinic, currently under construction below the River Terrace, is completed next summer.

The Civilian Occupational Health Clinic off of Corridor 3 must vacate its present location to allow Wedge 1 renovation to continue on schedule.

Additional temporary office space is being constructed in Corridor 10 to accommodate the Defense Finance and Accounting Service. The DFAS has been required to vacate its present office at 3A286 to allow for

Wedge 1 renovation to continue on schedule.

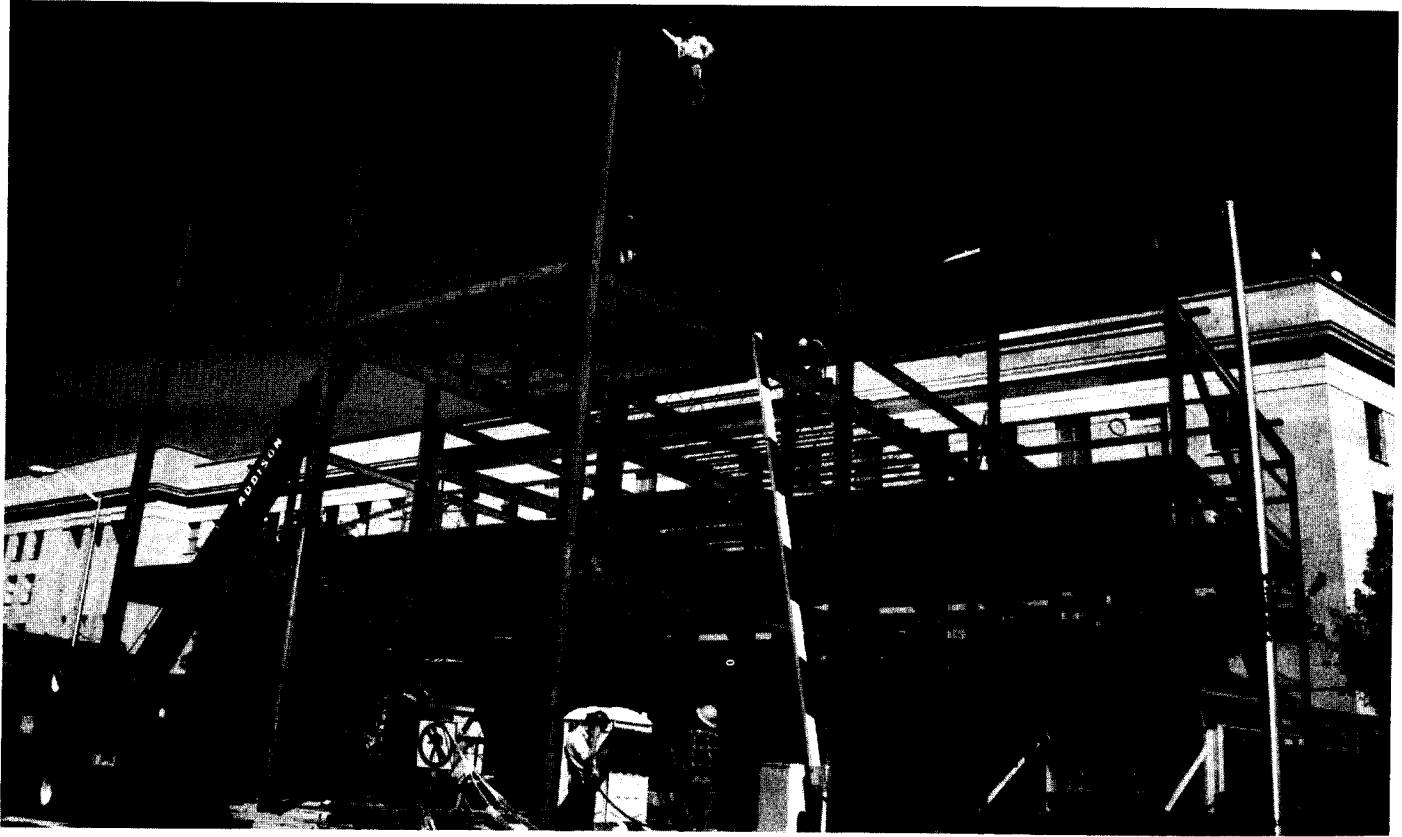
Wedge 1 is the area from the midpoint between Corridors 2 and 3 to the midpoint between Corridors 4 and 5, on all five floors of the Pentagon.



**Above:** Pentagon personnel walk by temporary swing space being constructed in Corridor 10 near the Concourse. The new office space will be the temporary home to the Defense Finance and Accounting Service, which must vacate Wedge 1.



**Temporary swing space is being constructed in the Concourse near the Anthony DiLorenzo Army Health Clinic. The new space will accommodate 20 offices and exam rooms currently operating in the Civilian Occupation Health Clinic off Corridor 3. The Civilian Clinic must be relocated to allow Wedge 1 renovation to continue as scheduled.**



Construction of the Federal Facilities Division shops building continues near Corridor 2 along the Pentagon's South Terrace.

## Temporary swing space rises along South Terrace

Over the last several weeks, a three-story temporary building rose rapidly along the South Terrace just south of the Corridor 2 pedestrian bridge. The new building will house the Washington Headquarters Services Federal Facilities Division (FFD).

FFD employees must vacate Wedge 1 to allow renovation activities to continue on schedule.

When completed later this fall, the 22,500-square-foot building will accommodate the FFD light industrial operations (metal, electric and carpentry shops) now located near Corridor 3 on the first floor of the Pentagon.

"We expect the shell of the structure to be completed in early November," said Brian Stone, the project's manager for the Renovation Program. Stone said that the FFD tenants should occupy the building this December.

Butler Construction is the primary contractor for the project and is the manufacturer of the prefabricated structure. Jack Bays Inc. is overseeing the project while a second subcontractor, Gilford Technology Corp., will complete the interior fit-out of the space, including mechanical rooms and bathrooms, and installation of the elevator and the electrical, heating, ventilation and air conditioning systems.

After the building is complete, the Pentagon's Alterations Work Group will work with Gilford Technology Corp. to build out the space based on the user's requirements. The Pentagon Building Management Office will maintain the facility once it is occupied.



RAT Patrol - That's "RAT" as in Renovation Action Team. Bob Heflin (right), RAT supervisor for construction of the FFD facility, and Bill Thomas, electrical engineer, review electrical designs. "We're on site to inspect the work and to ensure design specifications are met," said Heflin.

## Letters to the Editor

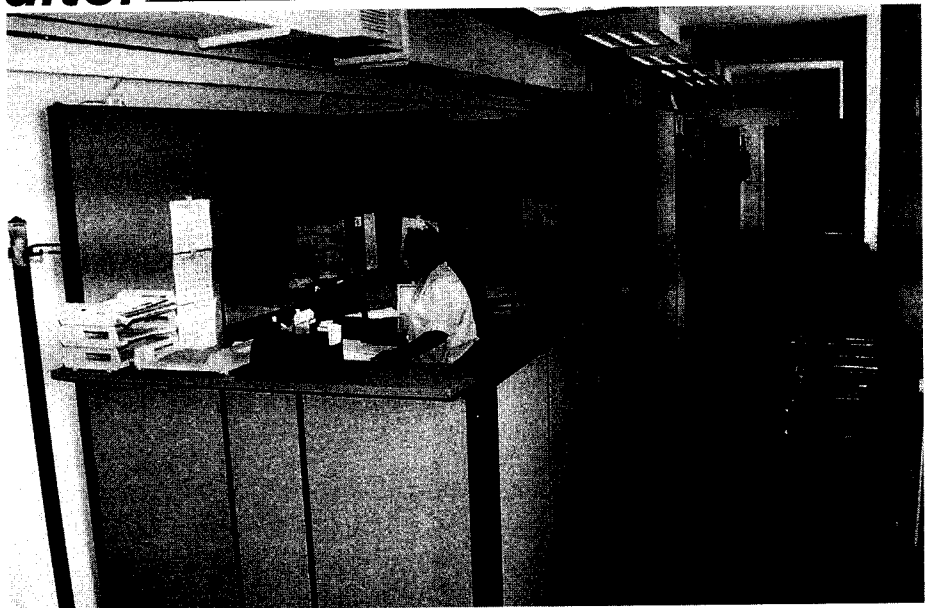
As mentioned in the previous issue of *The Renovator*, a key to the success of the Pentagon Renovation Program is to maintain an open dialogue with tenants.

Toward that end, this new column will serve as a forum whereby comments from tenants about renovation activities and our responses can be shared with all Pentagon personnel.

The editor reserves the right to print only those letters that are pertinent to the greatest number of employees in the Pentagon.

If you have any comments or questions about renovation activities, please e-mail us at:

[prhelpline@army.pentagon.mil](mailto:prhelpline@army.pentagon.mil)  
or call our HELPLine at:  
703.697.HELP (4357).



Susan Williams, a secretary with WHS-RE&F, files away some documents in new office space in the A-Ring. The construction of temporary swing space in the A-Ring continued in September. The new offices block the view of the Center Courtyard from most of the A-Ring on floors 2-5, prompting the letter below (left).

### Swing space in A-Ring causes tenant concern

Dear Editor,

I am very distressed to see that office spaces are being constructed next to the outdoor windows on the A-Ring on the third and fourth floors beginning at the 10th corridor.

The psychological impact of this configuration is debilitating. With so much emphasis being put on the environmental aspects of renovating the Pentagon — removing asbestos, lead pipes, etc. — it doesn't look like anyone provided for the welfare and morale of employees who have to walk the rat's maze of corridors that now skirt the offices on the A-Ring.

How much more of the A-Ring will be eaten up by these newly-constructed office spaces?

VTY,  
Roberta Berryman, OSD/OD PA&E

### RESPONSE from the Editor

Dear Ms. Berryman,

We certainly understand your comments about the loss of views and natural light resulting from construction of office space in the A-Ring. For these obvious reasons, the A-Ring was our least desirable site option for swing space and was to be used only as a last resort.

However, during the process whereby external swing space was allocated to the various agencies, it was determined that certain OSD personnel located in Wedge 1 must remain in the building due to the nature of their missions.

We looked at every available square foot in the building and could find no place to accommodate the 70,000 square feet of space needed by OSD offices.

Several options were presented to Deputy Secretary of Defense Dr. John Hamre. Based on the relatively lower costs of building out space inside the Pentagon as opposed to constructing a new site elsewhere on the Pentagon reservation, the A-Ring buildout was the option Dr. Hamre approved.

In addition, limits on the amount of leased office space we can secure prevent us from

## Letters to the Editor

(continued from previous page)

obtaining any new external swing space at this time.

In summary, we ask for your patience as Wedge 1 is renovated. Renovating an occupied building while maintaining full operations is extremely difficult. Lee Evey, our program manager, equates our mission to turning a black and white television into a color one without ever turning the set off.

Working around people while minimizing disturbances is a daily challenge. In fact, to meet this challenge, much of our work is done at night and on weekends.

It is important to keep in mind that the Pentagon has never undergone a major renovation in its 55-year history and every major build-

ing system needs to be replaced, including the heating, ventilation, air conditioning, plumbing, and electrical systems, and the entire telecommunications network. Trying to do this while making sure no one loses power to a computer is no easy task.

Also keep in mind that while the inconveniences are temporary, the renovations are being designed to improve the Pentagon for the next 50 years.

We hope this sufficiently answers your question about the A-Ring build-out. However, if you need additional information or if you would like a tour of the renovation activities, please don't

hesitate to call our HELPline at 697.HELP (4357).

Thank you,  
The Editor

*Thank you very much for your reply. And I would compare the renovation of the Pentagon to developing software — you can never make everyone happy. But I was happy to receive your detailed explanation.*

*Roberta Berryman  
OSD/OD PA&E*

## Library begins new chapter in temporary home

The relocation and consolidation of the Pentagon Army Library into the renovated A-ring was successfully completed within a scheduled three-phase move plan. The project, which ran from September 1997 through April 1998, consisted of construction of the barrier wall within the library space, and renovation of the A-ring corridor to accommodate the consolidation of library personnel and the reference collections.

The consolidation required moving 549 linear feet of shelving and shifting approximately 139,450 books and periodicals, and relocating 12 staff librarians, furniture and equipment including the circulation desk and the controlled security entry.

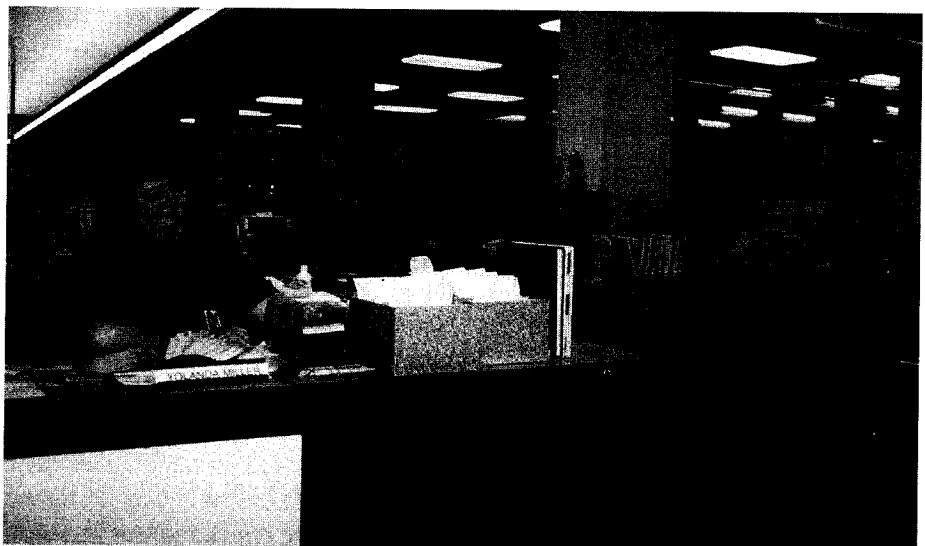
In order to minimize operational downtime, all move activities were scheduled after normal business hours and during the weekend. Each

move phase coincided with a construction phase, scheduled to insure that library patrons had access to all facilities at all times.

Coordination meetings were held weekly with the Library Move Rep-

resentatives, the construction contractor and the Pentagon Renovation Relocation Planning Team.

The library remained fully functional throughout all phases of the relocation and consolidation.



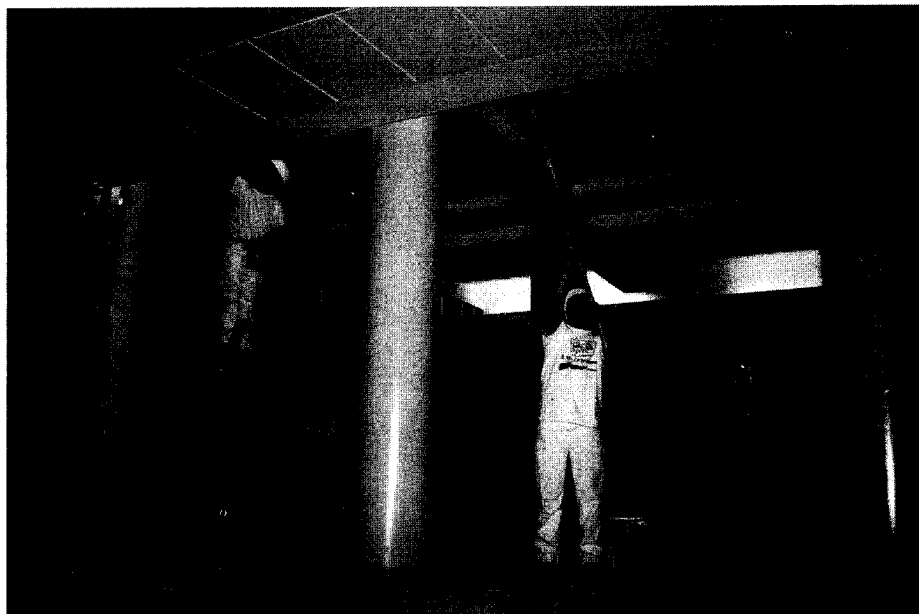
Yolanda Miller, reference librarian, takes a call at her desk located in what used to be the first floor A-Ring. The entire library was temporarily relocated this spring.

## Corridor 8 entrance nears completion

In October, the footsteps of more than 5,000 personnel will test the integrity of the completed terrazzo floor in the Corridor 8 entrance area. The placement of the new floor marked the completion of the major construction elements of the project. "We're about ready to turn over the entire area to the Defense Protective Service for the installation of security equipment," said Jeanine Molloy, project manager for the Renovation Program.

"Once all the equipment has been installed, we'll see a tremendous improvement in security," said John Pugrud, deputy chief for Defense Protective Service (DPS). "Especially in our ability to positively identify personnel." Pugrud is referring to the new entrance control system currently being installed in the corridor. The key features of the system are 10 bi-directional turnstiles that will optically scan DoD building passes and electronically verify the validity of each building pass as personnel enter and exit the Pentagon. DPS officers will still be stationed at the entrance to ensure that the passholder's face matches the photo on the pass.

Pugrud said that once the turnstiles are installed and operational, DPS will request the cooperation and



Painters put on the finishing touches to the ceiling in the Corridor 8 entrance.

patience of all personnel as the new system is implemented. "Upon the first time tenants insert their building passes into the card readers," said Pugrud, "there may be a few seconds of delay as the computers process the information on the building pass. There should be no delay during all subsequent insertions."

If a pass has expired or is invalid for other reasons, an audible signal from the turnstile will alert DPS officers that a problem exists. A separate visitor's security station will divert non-DoD passholders from the main flow of traffic.

"The new clearance procedures will decrease the potential for bottlenecks at the security station," said John Jester, chief of DPS. "Less congestion translates to better security."

Jester added that the overall renovation of the Pentagon will greatly improve security throughout the building. "We're pleased with the way the entrance has turned out and look forward to implementing the new technology at all entrances to the building. When the renovation is complete, we'll have a much tighter facility in terms of safety and security."

## HELPLine, e-mail and web site enhance information exchange

In an effort to ensure that Pentagon tenants have continuous access to information about the Pentagon Renovation Program, several channels of communication have been established.

If you have any questions about Pentagon Renovation Program activities, please call our **HELPLine** at **697.HELP (4357)**. The phone is manned from 6 a.m. to 6 p.m. each

weekday. You can leave a message on our answering machine at all other times and we will respond to you promptly.

You can also e-mail us at: **prhelpline@army.pentagon.mil**. The letter printed on page 2 was received through our new e-mail address.

And please check out our new web site at: **www.dtic.mil/pentagon\_renovation**.

The site includes information about the Program including an overview, project information, computer-generated images of future renovations, construction photos, contracting information, swing space orientation guides including maps, and much more.

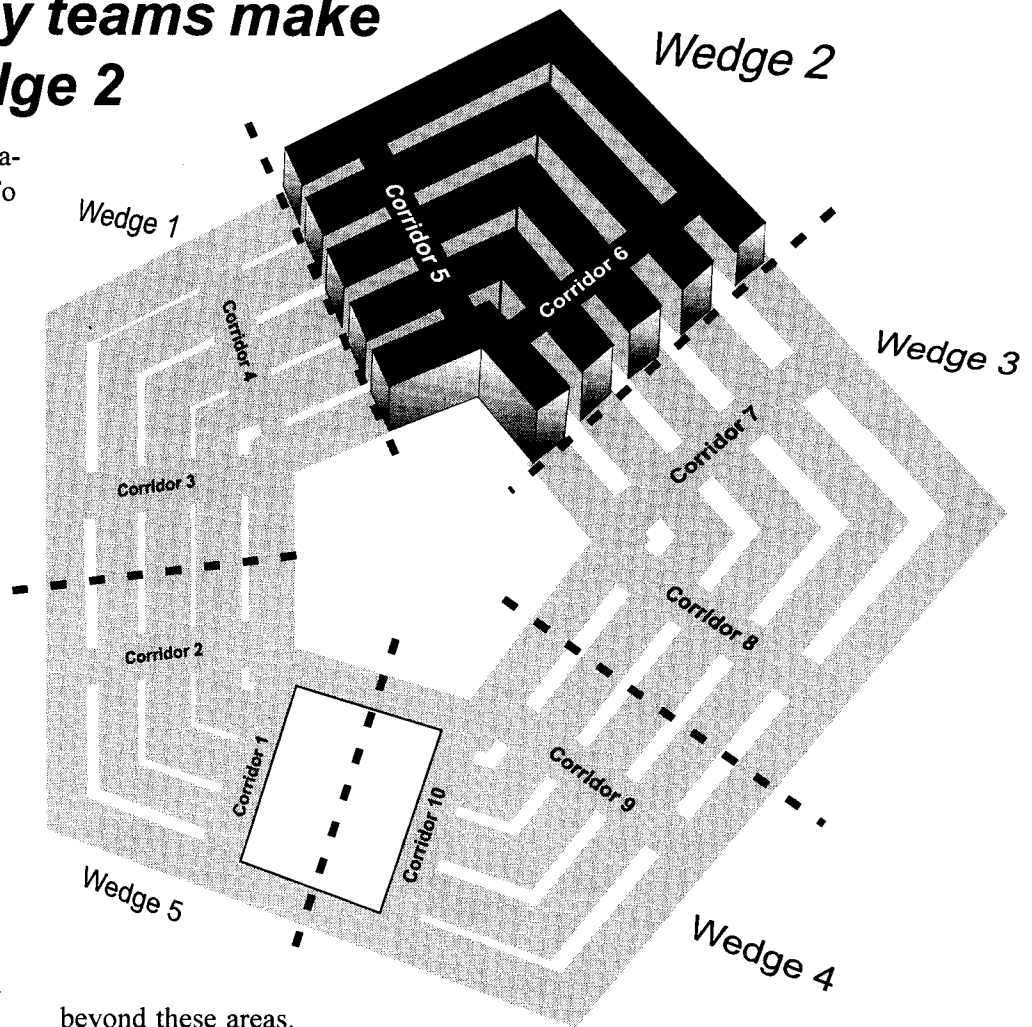
And don't forget our Renovation kiosk located on the 2nd floor A-ring, between Corridors 1 and 2.

## Building survey teams make inroads in Wedge 2

The planning process for renovation of Wedge 2 is starting now. To prepare for this effort, survey teams began a field investigation effort during the second week of October 1998.

The architectural/engineering firm HSM&M (Hayes, Seay, Mattern & Mattern), and their subcontracted firms, will be in the Pentagon during the next three to four months examining and identifying existing building utilities.

Also, through coordination with tenant representatives, the Pentagon Renovation Program will gather tenant office information and locations. Their work will include all five floors, in areas served by Corridors 5 and 6. Design requirements and existing mechanical equipment conditions may necessitate extending the investigation



beyond these areas.

This information will be used to

formulate design and move plans for the renovation of Wedge 2.

Although all of the information cannot be gathered at one time, the Pentagon Renovation office is coordinating surveys to limit the number of survey teams sent to offices. This will reduce the burden on tenants to accommodate visits from multiple survey teams.

As part of the field investigation, the design teams will need to document photographically the building systems and structure characteristics within office and common areas. They will

not photograph secured compartment areas or areas designated by tenants to be security sensitive.

"The Pentagon Renovation Program would like to thank tenants in advance for their cooperation and understanding during this critical information gathering effort," said Joe Sacco, Wedge 2 project manager.

According to Sacco, the schedule of areas to be surveyed will be posted on the Pentagon Renovation Program's website at: [www.dtic.mil/pentagon\\_renovation/](http://www.dtic.mil/pentagon_renovation/). Questions concerning the Wedge 2 planning effort can also be directed to the Pentagon Renovation office at 697-HELP (4357) or email: [prhelpline@army.pentagon.mil](mailto:prhelpline@army.pentagon.mil).



Personnel make their way from the Center Courtyard into the apex at Corridors 5 and 6 and into the portion of the Pentagon that will soon be known as Wedge 2.

## Solar Collector reflects move toward energy efficiency

In case you were wondering, the solar collector along Rt. 395 is not part of the Pentagon Renovation Program.

Instead, it is part of a joint effort between the Department of Defense and the Department of Energy to explore alternative sources of energy for the 21st Century.

The collector rises nearly 50 feet and its 16 mirrors follow the sun as they focus sunlight into an engine that generates electricity.

According to Bob Billak, energy manager for Washington Headquarters Services, on a clear, sunny day, the unit can generate 25 kilowatts per hour, which then feeds into the Pentagon's electric grid.

"In layman's terms, 25-kilowatts per hour is the same amount of energy that would be used per hour by four 3,000-square-foot homes running fully on electrical power," said Billak. "That amounts to less than one percent of the electrical energy needed to power the Pentagon each hour," he added.

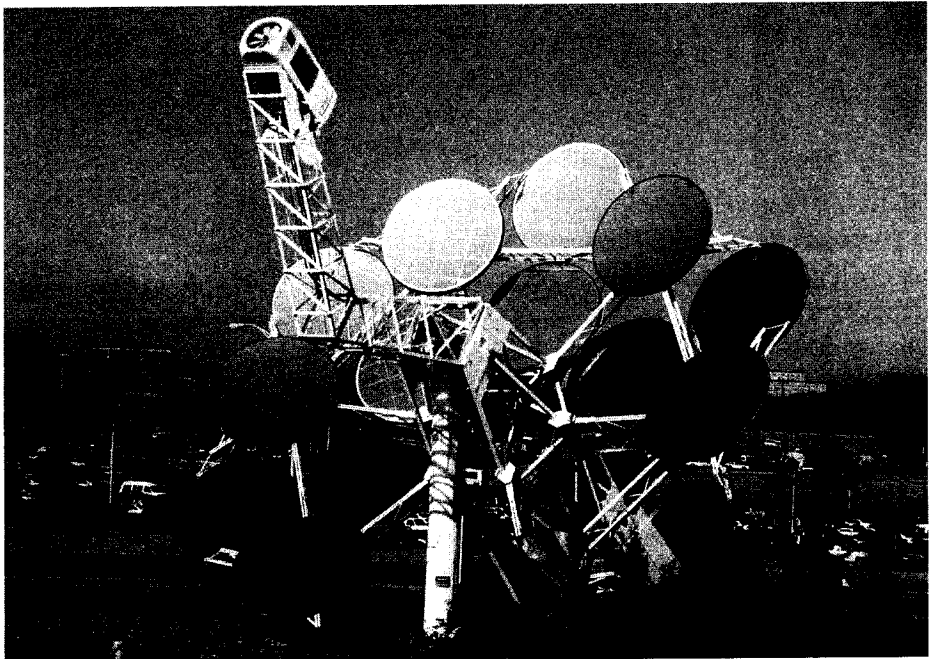
The \$300,000 unit consists of 16 10-foot diameter concave mirrors, which collect sunlight and focus it into an engine. "At its peak, the engine reaches a temperature of 1800 degrees fahrenheit," said Billak.

The unit is owned by Arizona Power and will be transported back to Arizona at the end of October.

Billak said that the cost of the solar units could be driven down from \$300,000 to \$80,000 if they were to be mass produced. Even at the lower price, current solar technology would not be cost efficient for the Pentagon to implement on a broader scale. "We simply don't have enough sunlight in this region to make

the units cost effective," said Billak. Arizona, by comparison, receives nearly twice the amount of sunlight that the D.C. area averages in a given year.

Billak did say that the Pentagon is considering the technology for localized uses. "We're looking at implementing similar units to provide hot water to the POAC and possibly to provide energy to the Child Care Center," he said.



The solar collector located on the edge of the Pentagon Reservation near Route 395 is part of a joint initiative between the Department of Defense and the Department of Energy to explore alternate sources of energy for the 21st Century.

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